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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,259	09/08/2003	Wen-Han Hsieh	SUND 477	8609

23995 7590 04/09/2004

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1101 14TH STREET, NW  
SUITE 500  
WASHINGTON, DC 20005

EXAMINER
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KIM, RICHARD H

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 04/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/656,259

**Applicant(s)**

HSIEH ET AL.

**Examiner**

Richard H Kim

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

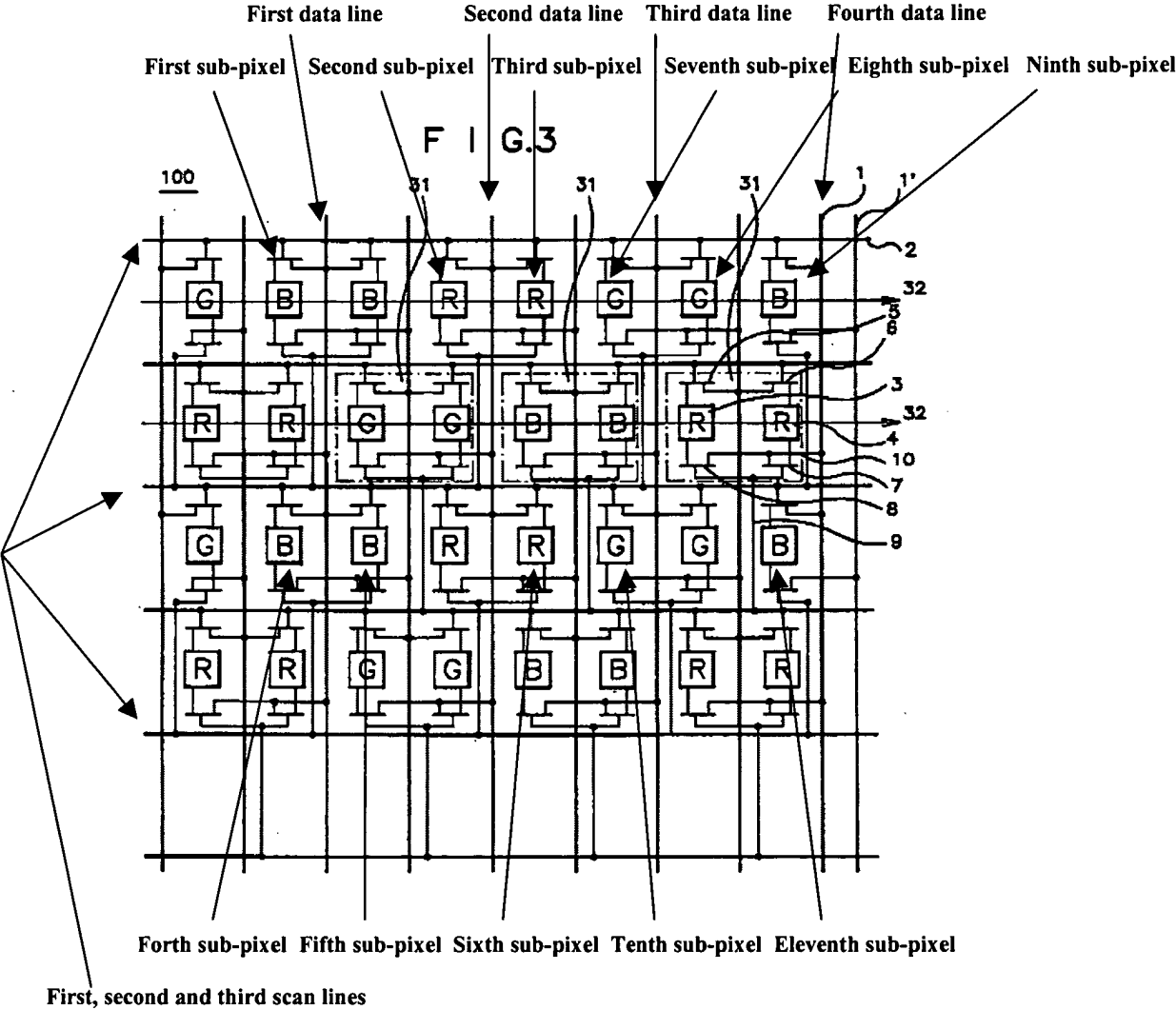
1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Ogurstov et al. (US 5,457,552).

Referring to claim 1, Orgurstov et al. discloses a device comprising a first data line and a second data line, both of which being arranged substantially in parallel (Fig. 3, ref. 1); a first scan line, a second scan line, and a third scan line, all of which being arranged substantially in parallel and arranged in a matrix pattern together with the first data line and the second data line (Fig. 3, ref. 2); a first pixel comprising a first sub-pixel coupled to the first data line and the first scan line; a second sub-pixel coupled to the second data line and the first scan line; and a third sub-pixel coupled to the second data line and the second scan line; and a second pixel comprising a fourth sub-pixel coupled to the first data line and the second scan line; a fifth sub-pixel coupled to the first data line and the third scan line; and a sixth sub-pixel coupled to the second data line and the third scan line (see figure below), wherein when the first scan line is enabled, data on the first data line is input to the first sub-pixel and data on the second data line is input to the fourth sub-pixel; and when the third scan line is enabled, data on the first data line is input to the fifth sub-pixel and data on the second data line is input to the sixth sub-pixel (col. 5, lines 9-34; col. 7, lines 3-56).



Referring to claim 2, Ogurstov et al. discloses a device wherein the liquid crystal display is formed by repeatedly arranging the unit in a matrix pattern (Fig. 3).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogurstov et al.

Referring to claim 3, Orgurstov et al. discloses a device comprising a first data line, a second data line, a third data line, and a fourth data line, all of which being arranged substantially in parallel with each other (Fig. 3, ref. 1); a first scan line, a second scan line, and a third scan line, all of which being arranged substantially in parallel with each other and arranged in a matrix pattern together with the first data line, the second data line, the third data line, and the fourth data line (Fig. 3, ref. 2); a first pixel comprising: a first sub-pixel coupled to the first data line and the first scan line; a second sub-pixel coupled to the second data line and the first scan line, and a third sub-pixel coupled to the second data line and the second scan line; a second pixel comprising a fourth sub-pixel coupled to the first data line and the second scan line; a fifth sub-pixel coupled to the first data line and the third scan line; and a sixth sub-pixel coupled to the second data line and the third scan line; a third pixel comprising a seventh sub-pixel coupled to the third data line and the second scan line; an eighth sub-pixel coupled to the third data line and the first scan line; and a ninth sub-pixel coupled to the fourth data line and the first scan line; and a fourth pixel comprising: a tenth sub-pixel coupled to the third data line and the third scan line; an eleventh sub-pixel coupled to the fourth data line and the third scan line (see figure above);

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wherein when the first scan line is enabled, data on the first data line is input to the first sub-pixel, data on the second data line is input to the second sub-pixel, data on the third data line is input to the eighth sub-pixel, and data on the fourth data line is input to the ninth sub-pixel; when the second scan line is enabled, data on the second data line is input to the third sub-pixel, data on the first data line is input to the fourth sub-pixel, data on the third data line is input to the seventh sub-pixel, and data on the fourth data line is input to the twelfth sub-pixel; and when the third scan line is enabled, data on the first data line is input to the fifth sub-pixel, data on the second data line is input to the sixth sub-pixel, data on the third data line is input to the tenth sub-pixel, and data on the fourth data line is input to the eleventh sub-pixel (col. 5, lines 9-34; col. 7, lines 3-56). However, the reference does not disclose that a twelfth sub-pixel is coupled to the fourth data line and the second scan line.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a twelfth sub-pixel is coupled to the fourth data line and the second scan line since although the reference does not show the twelfth sub-pixel, one having ordinary skill in the art at the time the invention was made would have known to include the twelfth sub-pixel following the eleventh sub-pixel in order to provide a full display. Figure 3 is a representation of a only a portion of the pixels of an entire display. As disclosed by Ogurstov et al. the illustration shown in Figure 3 is a plan view of only "a part of a liquid crystal display" (col. 4, lines 47-48). Therefore, one having routine skill in the art would have expected at least an extra column of pixels on the right side of the figure. As can be clearly seen from pattern of figure 3, each blue sub-pixel is adjacent to another blue sub-pixel. Therefore, since the reference states that the figure is only a part of a liquid crystal display, one would expect that another blue

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sub-pixel would be situated to the right of the eleventh sub-pixel. Furthermore, as can be seen from the fourth sub-pixel and the fifth sub-pixel, both sub-pixels are connected to the first data line and second scan line. Therefore, following such a pattern, one having routine skill in the art would have expected that a twelfth sub-pixel situated to the right of the eleventh sub-pixel would be connected to the fourth data line and the second scan line. One having routine skill in the art would know that LCD's generally follow a consistent pattern, allowing consistency across the full display. Even though Figure 3 only shows a portion of the display, one would have reasonably expected that the rest of the display would follow the same pattern.

Referring to claim 4, Ogurstov et al. disclose the device wherein the liquid crystal display is formed by repeatedly arranging the unit in a matrix pattern (Fig. 3).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard H Kim whose telephone number is (571)272-2294. The examiner can normally be reached on 9:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard H Kim  
Examiner  
Art Unit 2871

RHK



**TARIFUR R. CHOWDHURY**  
**PRIMARY EXAMINER**